

Report  
from  
the President  
Virginia  
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SPECIAL ISSUE





# A Message from the President



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**A**cademics. Research. Public service. Each a vital part of everyday life at a major urban university. And the yardsticks by which the impact of a university, its faculty, and its students are measured.

As society looks to universities for help with many of its complex problems, universities are faced with the challenge of providing knowledge which will help pave the way for solutions. At Virginia Commonwealth University we are acutely aware of the vital role universities must play in today's society. During the past year VCU realized a number of achievements in research, academics, and public service—achievements which signal not only an awareness of this role, but a commitment to it.

In research VCU retained its status as one of the country's top 80 universities in terms of federal dollars received to support basic and applied research. Last year VCU received \$28.7 million to fund research projects on the Medical College of Virginia and Academic Campuses.

As one of the nation's leading university health science centers, the MCV Campus counts among its faculty a number of scientists of international stature who are engaged in innovative research activities. Currently a university investigator is heading one of the country's largest Environmental Protection Agency-sponsored studies designed to test the safety of drinking water. In the university's five statewide family practice centers a \$2.7 million grant is supporting research into the contribution of genetic and familial factors to cardiovascular disease and the use of noninvasive technology to detect early stroke warnings. Surgeons in the university hospitals are working with a new surgical technique for reconstruction of the breast without the use of synthetic implants.

VCU's contributions to research extend beyond health care. For example, in the Department of Biology a \$50,000 grant from the Virginia Endowment for the Environment is helping educate Virginia's teachers about toxic substances. Funds from a National Institutes of Mental Health grant are being used in an investigation of incarcerated rapists conducted by professors in the Department of Sociology and Anthropology. Another NIMH grant is funding a project aimed at helping educators work with children from broken homes. That project is under the direction of a professor in the Department of Psychology.

Activities in the classroom and the conference room complement those which take place in the laboratory. During the past year VCU planned for the implementation of five new graduate degree programs, saw many of its faculty gain national and international recognition, and

served as host for a number of major conferences and seminars.

The five new graduate degree programs, all of which admitted their first students during the fall semester, are the M.Ed. in early childhood education, the D.P.A. in public administration, and Ph.Ds in health services organization and research, business administration, and urban services. With these additions VCU now offers 146 degree programs including 60 bachelor's, 63 master's, 20 doctoral, and three first-professional.

As for faculty accomplishments, VCU professors were selected to serve on some of the country's most prestigious professional organizations such as the Pan American Society of the American Association of Biochemical Societies, the Academy of Pharmaceutical Science, the National Association of Black Sociologists, and the American Board of Pediatrics. Participation in international exchange programs allowed one professor of German to spend a year at the University of Paris, while a professor of political science taught for a term in Wolverhampton, England. Other faculty received Fulbright Fellowships, National Research Service Award Fellowships, and a National Endowment for the Humanities Fellowship.

At home, faculty participated in over 100 conferences which VCU hosted during the past year. Among the conferences was an international symposium on the "Electronic Structure and Properties of Hydrogen in Metals" which attracted representatives from Japan, West Germany, and several other countries.

A major part of VCU's advances in academics during the past year involved the opening of several new facilities. On the MCV Campus one of the state's largest acute care hospitals opened in June. While serving as a quality facility for patient care, the 539-bed, \$60 million building provides an upgraded site for the training of future professionals in all health care disciplines. A new \$8 million facility to house the MCV/VCU Cancer Center also opened during the summer.

On the Academic Campus a \$5.6 million Performing Arts Center was completed. Along with providing additional teaching and rehearsal space for the Departments of Theatre and Music, the center features a contemporary performance hall which has already played host to the Vienna Symphony.

Outside the classroom VCU continued to distinguish itself as several student athletes earned honors. Two players achieved all-Sun Belt status in men's basketball, while a third was named Freshman of the Year. A member

of the men's soccer team also received all-Sun Belt honors. In women's sports the VCU softball team won the state championship, and a member of the basketball team was named all-state.

University involvement in a variety of projects made the past year an active one for public service. Under the auspices of the Department of Urban Studies and Planning, work began on a series of revitalization projects in the downtown Richmond area. Meanwhile, a VCU professor of gerontology and psychology was instrumental in developing the first Alzheimer's and Related Diseases Support Group of Greater Richmond, an organization designed to help family members cope with victims of Alzheimer's, a progressive deterioration of the brain cells which afflicts over 1 million Americans.

As part of its public service efforts VCU reaches out to nontraditional students through its Division of Continuing Studies and Public Service. The division offers a variety of courses and activities designed to meet the needs of adult, part-time students and other members of the community who encounter difficulty attaining educational goals. During the past year the division served nearly 100,000 members of the community and offered over 2,000 continuing education activities. These included credit courses and special degree programs, as well as noncredit classes for cultural enrichment and professional growth.

Two other events are representative of the university's public service efforts. During 1981-82 the Virginia Institute for Law and Citizenship established its headquarters in the university's School of Education. The institute, through its efforts to teach children about law and citizenship, strives to reduce the number of juvenile crimes in the state. Also, the Virginia Birth Defects Registry was established at the university with the aid of a grant from the Developmental Disabilities Unit of the Virginia Department of Mental Health and Mental Retardation. The registry provides an organized system for monitoring children born with birth defects in Virginia.

The university's involvement in public service activities, as well as its achievements in research and academics, signify VCU's commitment to being an institution to which society can turn in dealing with many of its problems. We share that commitment with you in the pages that follow.





# The dynamics of dance

Since its birth in 1980 the university's dance/choreography department has nearly doubled the size of its faculty and the number of majors, has brought several influential figures in the world of dance to the university, and is now operating in a renovated building which provides state-of-the-art facilities for all forms of dance. These factors, combined with the continued influence of VCUDAN-CECO, a performing company, are evidence of the emergence of dance as a popular course of study at the university.

The 40 students majoring in dance receive training in all forms of the art: modern dance, ballet, tap, folk, Afro-Caribbean, and ballroom. According to Anne Andersen, department chairman, modern dance is the focal point of instruction throughout the four-year program. "We give students a steady diet of modern dance techniques," said Andersen.

Classes in music, history of dance, improvisation, composition, and choreography add to a well-rounded curriculum which includes a semester course in kinesiology. That course helps students understand the anatomical, physiological, and physical aspects of

human motion and their application to dance.

The curriculum is bolstered by visits from nationally-known dance professionals who come to the university to teach and perform. For example, in September Poonie Dodson, a dancer/choreographer based in Chicago, came to VCU to teach a master class in modern dance and to present a program of solo dances and theatre pieces. Dodson, whose training began in the theatre department at VCU, has performed with Nan Solbrig's Chicago Moving Company and with the Chicago Repertory Dance Ensemble. He recently created works for Bess Snyder and Company in Los Angeles and for Akasha and Company in Chicago. Jeff Duncan, artist-in-residence at the University of Maryland-Baltimore, gave a performance of solo dances in early November.

Students seeking admission into the department must successfully complete a rigorous application process. An audition is the major factor upon which the admission decision hinges. The audition is set up as a regular dance class during which faculty evaluate students' ability and promise.

Following the audition, prospective students are interviewed. "We try to find out what they are looking for in dance," said Andersen. "We gauge their interests and let them know what kind of education they'll receive from us. Again, our emphasis is on modern dance, and we make that clear. We are not a training program for ballet."

Students are also evaluated on the strength of their previous dance experience and the instructors with whom they've studied. Recommendations from past instructors are mandatory.

Recruiting quality students has been one of Andersen's main concerns since she arrived as department chairman in August 1980, one month before the department began operation. She has recruited heavily in the Northern Virginia and Tidewater areas. In addition to sending literature to schools throughout the state, Andersen has made visits to many high schools in an effort to generate interest in VCU's program.

Prior to the establishment of the department, courses in dance and choreography were offered





through the university's Department of Health and Physical Education. Two faculty members, Frances Wessells and Patricia Pape, taught the majority of the courses in a studio set aside for dance instruction in the university gymnasium.

Two years after the creation of a formal department came a move to a different building, the former Cathedral High School, on the far western edge of the Academic Campus. The building was badly in need of renovation to accommodate its new occupants, renovations which were promised when Andersen accepted the position of department chairman.

Two years of planning and four months of renovation have resulted in an expanded rehearsal and performance facility which meets the needs of a growing department. Throughout the process care was taken to ensure all details were correct, such as construction of floors with the necessary amount of resilience and the placement of bars at the appropriate heights.

The two-story building houses eight studios, one of which is designed for performances, and provides ample lounge space and locker rooms for men and

women. The first floor contains two large studios for modern dance and ballet and three smaller studios for specialty classes. The second floor features a large performing studio as well as two smaller ones.

The performing studio includes a sophisticated lighting system that is linked into a sound and lighting control room. "It's unusual to find a system like this in a renovated building," said Andersen. "It's generally found in sleek, new dance studios."

All of the studios have special floor surfaces and most have bars and mirrors. "The rooms are designed to be as adaptable as possible," Andersen explained. "This allows different types of dance to be performed in them."

While adding teaching and rehearsal space, the renovated facility also presents an opportunity for the department to achieve another of its objectives: the formation of a community dance school. While plans are still incomplete, the facility would provide a site for area children to learn dance techniques. Andersen believes the community dance school would aid recognition of the VCU dance/choreography department in the greater Richmond area and enhance the growing city-wide interest in dance.

The formation of the dance department has also dictated a new role for VCUDANCECO. Established by Wessells six years ago, VCUDANCECO was a key factor which helped secure formal approval for the establishment of the department. A company which has toured throughout the state area in an attempt to build interest in modern dance, VCUDANCECO will spend most of its time on campus this year. "Staying on campus will help us increase awareness of dance within the university and bring dance closer to the student community," said Andersen.

While Andersen is generally pleased with the development of the department thus far, she and other faculty members are not satisfying themselves with their accomplishments. A proposal to establish a graduate program in dance/choreography has been submitted to the State Council of Higher Education. If approved, the graduate program would commence in 1984-85.



# Easing the pain of divorce

Over most of the past two years since her divorce Ann Miller has had to face a kaleidoscope of challenges for which she believed she was totally unprepared. No longer a wife but now a single parent, Ann has struggled to find a new life for herself and her two teenage daughters.

For a while it was a wrenching struggle that left her exhausted. Forced to sell her house and begin a new career, she also sought to balance her own anxieties with the strains the divorce had heaped upon her children. Pat, 12, had become withdrawn, and Julie, 10, developed a cough for which there appeared no clear explanation.

For many people the complex endings of a marriage can produce disturbing psychological, social, and economic stresses. The duration and intensity of such strains on both adults and children vary, but left unchecked they can often become chronic and lead to long-term maladjustments.

To forestall the development of such reactions in families like the Millers, researchers in the clinical psychology department at VCU initiated a Divorce Adjustment Project to help ease the stress of transition to the single-parent family.

It was during a tense period of accumulating difficulties that Ann heard about the project. Acutely aware that outside counseling was needed, the Miller family volunteered to participate in the study.

Begun in 1979 with funding from the National Institutes of Mental Health, the three-year study is under the guidance of Dr. Arnold Stolberg, assistant professor, and Patricia Cullen, project director. Implemented through the Chesterfield County school system, the Divorce Adjustment Project makes use of small support groups as vehicles to reduce divorce-related stress.

Stolberg is confident that long-term psychological damage is not an inevitable after-effect of divorce. He believes that with timely intervention parents and children need never suffer prolonged periods of stress. So far, preliminary data support this premise.

As part of the project parents and children meet in separate groups. The groups provide an atmosphere for exploring and coping with the confusing feelings of

helplessness, anger, loneliness, and rejection that often develop immediately after the break-up of a marriage.

Group leaders trained by the research team teach children like Pat and Julie to express their feelings about their parents' divorce. Expressing anger is particularly important, explained Cullen. Constructive ways of handling such emotion is a major part of the 12-week sessions. "The child support group," said Cullen, "is the children's time to talk and be heard."

For single parents like Ann, the ten sessions are designed to encourage mutual support and sharing between single parents who are in similar situations. Issues such as negotiating with a former spouse, making family decisions, or managing finances are among the topics participants explore and seek to resolve.

Over the three-year period of the grant the researchers are evaluating the child and the adult support groups in various combinations: meeting alone, simultaneously, or together.

"We've found the most successful group combinations are those in which the child and parent meet in separate but parallel sessions," said Stolberg. "In other words, it became a family affair."

The researchers are encouraged by these findings. Although not all of the data will be evaluated until July 1983, the researchers have already trained at least one person in almost every elementary and middle school in Chesterfield County to lead both a parent and a child support group. They have written a children's support group manual detailing the procedures to be followed for conducting the groups and have sent out, upon request from other school systems nationwide, over 200 copies. A training film, made in conjunction with students in the university's School of Mass Communications, details the steps to use in conducting a support group for children.

Today when Ann Miller talks about her divorce she describes herself as two women: the frightened and abandoned wife, and the new stronger and hopeful single parent. "All of us benefited from the groups," she said. "Our involvement prevented a very difficult period from becoming a crisis."





# Combating Alzheimer's disease

**H**enry Fonda, portraying an 80-year-old man in the film "On Golden Pond," goes out to pick berries, loses his way, and forgets how to get home. Martha Blake, 72, of Knoxville, Tennessee, sits all day staring out of window and speaks to no one. Peter Harrow, 58, of Portland, Maine, once a highly-regarded engineer, can no longer remember his name or the names of anyone in his family.

One of these people has mild and occasional forgetfulness that sometimes occurs during normal aging. One is depressed, a fairly common phenomenon in elderly individuals facing a variety of stressful situations. A third has Alzheimer's disease, an irreversible, progressive degeneration of the brain cells which leads to a decline in psychological and cognitive abilities.

In most cases there is little need to pay undue attention to occasional forgetfulness, while the worst effects of depression can often be treated. But for individuals afflicted with Alzheimer's disease, there is no treatment or cure.

Diagnosing Alzheimer's disease is difficult. Its initial symptoms are vague, nonspecific, and easily confused with those of other disorders. Consequently, it can often take up to two years of medical tests to rule out all other possibilities.

Confined to the brain, the progress of the disease is different for each person. At first only the individual with the illness experiences the imperceptible symptoms—a forgotten name or difficulty in concentration. Gradually, however, families, friends, and employers become aware of abnormal behavior patterns including increased memory loss, confusion, and the inability of the afflicted person to perform or complete simple tasks.

These inexplicable changes in essential functions are a source of deep frustration for the victim of the disease. As the disease progresses, it also creates an almost unendurable ordeal for family members. "When I first began my research on the disease I had no idea of the degree of suffering these families went through," said Dr. Stephen Harkins, associate professor of gerontology, psychiatry, and psychology.

Harkins' initial contact with families of Alzheimer's

sufferers began purely by chance while he was researching an early diagnostic procedure for the disease in 1975 in Seattle, Washington. Family members in the area who were referred to him would come to his laboratory to obtain information about the illness.

"I was struck by the fact that during the time they were waiting for a confirmation they went through chronic crises that continued even after the symptoms had been identified," Harkins recalled.

Harkins, who came to VCU in 1979, said he was attracted to the university's gerontology program because it would allow him to continue his research on Alzheimer's disease. It also enabled him to teach students to work with the elderly.

Soon after arriving at the university Harkins attempted to develop a research project that would lead to a method for making an early diagnosis. He had hoped to set up a data bank of symptoms and physical characteristics of the disease based on neurological, genetic, blood, and psychological tests. However, because of the difficulty in early diagnosis of the disease and the need to organize a large number of doctors and technicians working exclusively on the project, this approach proved infeasible.

"If we couldn't do that the next step was to work with family members, who in their own way are the national experts on the natural history of the disease," said Harkins. Thus, in the summer of 1981, Harkins announced the first meeting of the Alzheimer's and Related Diseases Support Group of Greater Richmond.

Delores Thomson, who lives in a small house in Richmond, wasn't thinking about data banks on that day in June. She was wondering how she was going to keep her sanity. Married to a once vigorous and successful insurance executive, for the past 11 years she has been the sole provider and caretaker for her progressively deteriorating husband, a victim of Alzheimer's disease.

Since her husband is incapable of caring for himself, Thomson has been forced to spend countless months indoors watching over her husband's wide swings in mood and his slow but steady decline in competence, speech, and cognition. "I can describe



him in one sentence," Thomson said. "He is the antithesis of the man I lived with most of my life."

When Thomson saw an advertisement in the Richmond newspapers announcing the formation of an Alzheimer's disease support group, she said she couldn't believe it. Part of the ad contained a description of a typical Alzheimer's patient. "The description fit my husband to a 'T'," she recalled. "It was as if someone had been living in our house. The ad described not only my husband's behavior, but my own frustrations, guilt, and anger. When I read the ad I told myself this couldn't be true. How could they know?"

According to Harkins, the support group has four purposes and goals. It is designed to first provide sharing and self-help. Self-help can include offering a ride to one of the meetings or setting up an exchange program in which one person will volunteer to watch another's family member while he or she goes shopping.

Another purpose is to educate family members about the disease. Information is presented concerning doctors in the area who specialize in this disease and the physical aspects of Alzheimer's and related illnesses.

Another goal of the group is to promote improved

patient care. One area of care which is stressed is nutrition. "Alzheimer's patients often eat continuously, or do not eat at all," said Harkins. "Sometimes, in severe cases, patients can no longer use a fork. By alerting participants to this possibility we can then advise them on what types of food to buy."

The group's fourth purpose is to draw attention to the disease. Harkins believes that the higher the visibility of Alzheimer's, the more researchers will be stimulated to isolate its causes and arrest its progress.

In a little over one year the group has become so successful that a satellite group has been formed. The Richmond group's larger monthly meetings have also spawned smaller, weekly meetings. Under the guidance of a psychologist and university graduate students, five to six family members participate in the smaller, more intense counseling sessions. These sessions may be the first of their kind in the country.

Thomson, who is active in the large and small groups, said she will do anything she can to help foster research into "this horrible disease." Whenever she gets the opportunity she speaks on radio and television about Alzheimer's. "By spreading the word I believe I can help other families avoid the suffering mine has endured."





# Revitalizing the capital city

The first in a series of revitalization plans to stimulate renewal in the city is being carried out by the university's Richmond Revitalization Program.

Working under Dr. Morton Gulak, program director and associate professor of urban studies and planning, are students and faculty from urban planning and other departments at VCU, planners from the city of Richmond, and a citizens' steering committee. All participants are interested in bringing about a resurgence of the urban community through creative reuse of buildings.

The initial project, which is called the Brook Crossing Commercial Center Revitalization Plan, shows the economic potential of an area of Richmond's downtown district extending from Broad Street north through Marshall Street and from First to Madison Streets. It demonstrates, through reuse, preservation, and conservation of buildings, how an older area of the city can be restored to a vibrant business and living setting. The area provides access, location, unusual buildings, and the tax advantages of reusing older buildings for investors, developers, and new business establishments.

The name of the project reflects the significance of Brook Road to the commercial and cultural history of Richmond. The proposed commercial center includes the Greater Richmond Arts District and its Masonic Temple, as well as the Empire and Regency Theatres.

Entertainment, art, and cultural growth are emphasized by the Arts District and are linked with the growth of retail stores, offices, restaurants, and trade craft shops. The plan of area-wide revitalization

also provides an opportunity for artists, entertainers, those who work downtown, current residents of Central Wards, and others to live in restored apartments above businesses, in studio and loft space, or in townhouses proposed for Marshall Street.

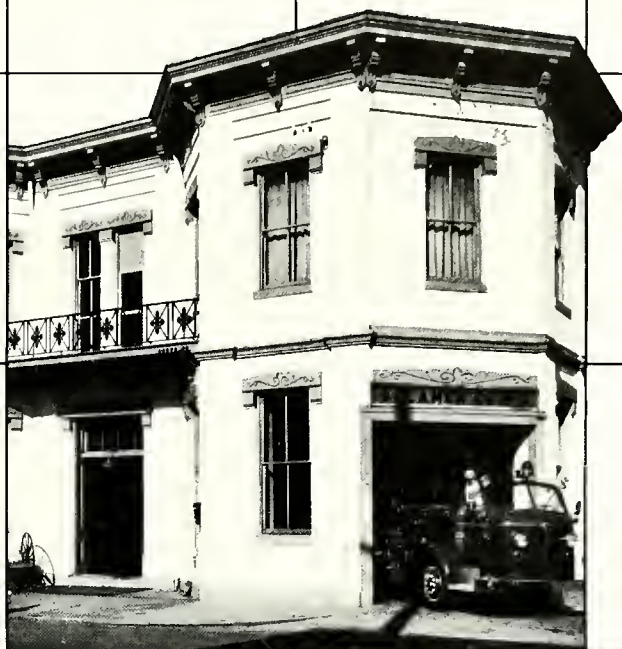
Art displays, theater and musical performances, and a public meeting place are proposed for a plaza to be developed as part of the Brook Crossing project.

Jefferson Street is to become a pedestrian walkway that can be used by theater-goers, shoppers, and for outdoor sales. Benches, lights, information kiosks, and other plazas are also proposed to create an atmosphere in which people feel comfortable strolling, viewing the sights, waiting for performances, and shopping.

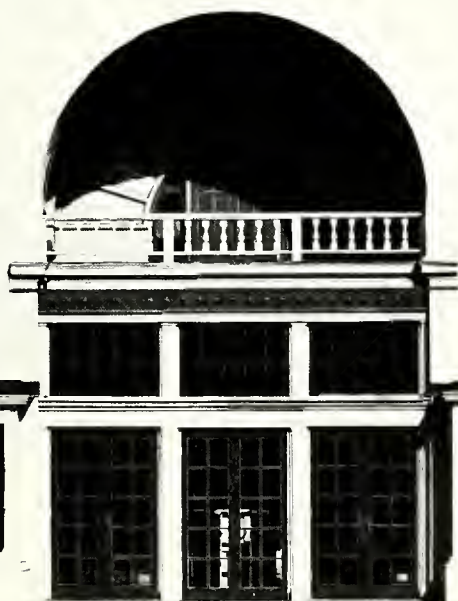
A number of other unrelated renewal efforts, both within Brook Crossing and outside, enhance the potential for revitalization. Within the area the Richmond Dairy Building, with its unusual architecture, is planned for renovation, as well as the expansion of the firehouse museum, Steamer Company 5, and the addition of two restaurants along Broad Street.

Nearby projects include Project One, a convention, hotel, and office complex; the Main Street Station; the Freight Station renovation; the Transportation Center; Shockoe Slip; and a renewed interest in development of the riverfront.

The revitalization program was initially made possible by a gift to the university from a private donor. After Brook Crossing, planners are to begin work on the Shockoe Bottom area of downtown Richmond.



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# Expecting the unexpected

A young woman sitting in the waiting room of the Antenatal Testing Center had already experienced two late-term miscarriages. So when she learned she was pregnant for a third time, she wrote a leading baby magazine and asked where she could turn to prevent a third heartbreaking miscarriage and save the baby she so badly wanted. The magazine wrote back with the advice that she come to the Medical College of Virginia Hospitals' Department of Obstetrics and Gynecology, which has gained recognition as a regional center for problem pregnancies.

Under the chairmanship of Dr. Leo Dunn, the Antenatal Testing Center in the hospitals' Nelson Clinic has made great strides in diagnosing fetal anomalies and in some cases even treating the fetus *in utero*.

"The future holds an entirely new area of medicine—fetal medicine. Now we treat the mother and the newborn, but soon we will also be treating the fetus and interfering with detrimental processes that are going on in the baby before birth," Dunn explained.

Dunn pointed out that advances that would have been thought impossible just a few years ago have already been made at MCV Hospitals. He noted Dr. Robert Petres, associate professor of obstetrics and gynecology, and Dr. Fay Redwine, assistant professor of obstetrics and gynecology, have already drained fluid from a hydrocephalic fetus *in utero* to prevent brain damage. In another case MCVH doctors drained blockage of a fetal kidney to prevent severe kidney damage and possibly death.

Many of the advances involving treatment of the fetus *in utero* have been made possible through sophisticated ultrasound equipment that is so refined it is possible to measure the fetus' arms, legs, and head, watch its movements in the uterus, and detect many abnormalities that otherwise would have gone undetected until birth.

"With the sophisticated ultrasound equipment given to us by Beta Sigma Phi, a professional women's organization, we literally can count the fetus' toes," said Redwine, who directs the genetic testing pro-

gram. Redwine and Petres counsel and test all of the high-risk patients through the Antenatal Testing Center.

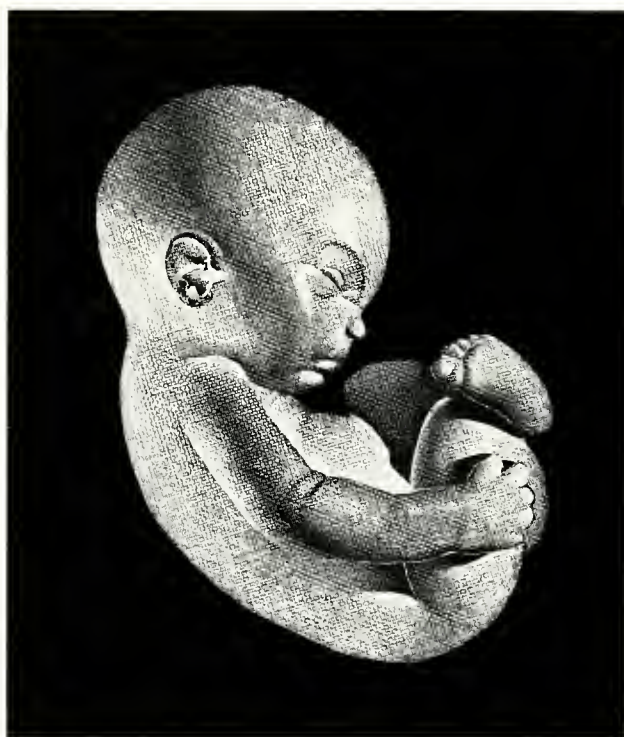
About 25 percent of the pregnant women seen by the Department of Obstetrics and Gynecology are classified as high-risk patients and are tested by the ultrasound unit. Established by Petres in 1971, it is believed to be the only ultrasound unit of its type. "Most ultrasound units are run by radiologists," explained Redwine, but here the unit is run by obstetricians who are also ultrasonographers. We are equipped to perform all the testing available to a high-risk patient in one center," Redwine commented.

In addition to ultrasound, other techniques such as amniocentesis and electronic testing are being used to diagnose fetal anomalies. Currently, Redwine is experimenting with transabdominal fetoscopy which permits visualization of the fetus to detect abnormalities, such as skin and blood disorders, that can't be seen in ultrasound. Transabdominal fetoscopy involves the insertion of a very fine instrument through the abdominal wall to take blood samples or a skin biopsy from the fetus.

One of the most exciting developments in the area of fetal medicine at MCV Hospitals will be the initiation of a statewide alpha fetoprotein screening program that will become part of routine prenatal care for all Virginia women. The alpha fetoprotein screening of a pregnant woman's blood can detect a series of fetal anomalies involving the central nervous system including anencephaly, menigomyelocoe, and spina bifida. According to Dunn, MCV Hospitals is prepared to test blood samples from pregnant women throughout Virginia, once the Food and Drug Administration gives the okay to such testing programs and releases the antibody needed to detect the presence of alpha fetoprotein.

"We are primarily in the area of diagnostics when it comes to fetal medicine. However fetal medicine has also begun to include therapeutics. In the future, we will be treating the fetus as well as the mother and the newborn," Dunn concluded.





# An education in real estate

Developing land for optimum use. Managing property to ensure profit. Understanding the complex world of real estate finance.

Skills in these areas are essential for today's real estate professionals. Making certain university graduates are equipped with such skills is the goal of the Real Estate and Urban Land Development Program, a division of the Department of Business Administration and Management. Since 1970 faculty members in the program have helped prepare students for careers in real estate brokerage, land development, appraising and investment consulting, site analysis and selection, real property management, commercial and mortgage banking, and a host of related fields.

Vital to the success of the program is support from the Virginia Realtors Foundation, which funds one of the largest endowed university professorships in real estate in the country. Since 1972 VCU has held that professorship, the Alfred L. Blake Chair of Real Estate.

The decision by the foundation to establish the chair at VCU was based on the university's distinguished history of education, the size and diversity of its academic programs, its tradition of public service, the size of its evening studies program, and its geographic location in the state's capital city.

To date, the foundation has contributed over \$850,000 to the chair and has nearly reached its goal of a \$1 million endowment. Only two other universities in the country, the University of Florida and Ohio State University, have endowments exceeding \$1 million in support of real estate professorships.

The Blake Chair was named in honor of the late

Alfred L. Blake, Sr., a founder of the Richmond-based firms of Mortgage Investment Corporation and Alfred L. Blake and Sons, Realtors. He also served as a president of the Real Estate Board of Richmond.

Funds from the endowment are used to stock one of the nation's most comprehensive collegiate real estate library collections and support a graduate program whose alumni work in real estate-related fields throughout the country.

Dr. James Boykin, the university's Alfred L. Blake professor of real estate, said support from the foundation also aids course development, research, and publications. One such publication is *Major Real Estate Markets in Virginia*, a quarterly survey which provides assistance to state firms engaged in mortgage lending, construction, land development, and marketing.

Monographs and other publications are issued several times each year. Among the monographs which have been published are *Promotional Strategies of Realtors*, *Access to Solar Energy: Who Owns the Sun?*, and *Tax Considerations in Owning Vacation Homes*. Some of the publications developed by the Real Estate and Urban Land Development Program are the result of projects conducted by the university's Virginia Real Estate Research Center. The center was established in June 1981 as the program's research arm.

The Real Estate and Urban Land Development Program has an enrollment of more than 700 students, many of whom are studying on a part-time basis while employed by area realty firms in positions which provide practical experience to augment classroom instruction.







# Brain cancer—a call for nutrition

“Starve a cancer; feed a patient” may become the new health adage of the 1980s.

That's what Dr. Harold Young, professor of surgery/neurosurgery, and a team of university researchers are trying to discover. Young, along with biochemist Dr. William Banks, Jr. and research dietitian Sandra Jennings, are studying amino acid-restricted diets and their possible use in the treatment of patients with primary brain cancer, particularly glioblastoma multiforme. The latter is the most malignant of all brain tumors.

Researchers have already determined that diets low or deficient in certain amino acids result in decreased tumors in mice. However, diet deficiencies produced other detrimental effects on the mice. Therefore, through a contract from the National Cancer Institute, a study was launched at VCU and the University of Tennessee to determine the effect of restricting only one essential amino acid from the diet of patients with primary brain cancers.

“The theory was that you could starve a tumor without starving the patient,” said Young. In the research at both VCU and the University of Tennessee the effect of an amino acid-controlled diet was tested on 43 brain cancer patients. The findings: this form of diet restriction therapy was at least as effective as other forms of therapy, and in some cases was more effective in prolonging survival. University researchers found that the careful restriction of one amino acid was safe and did not impair the health of the patient. “We found that you can lower the amino acid in the blood without harming the patient and that patients will stay on this therapy,” Young noted.

There were definite advantages to this therapy over other current therapies. There were none of the side effects associated with the presently-used forms of chemotherapy for this type of cancer. Patients seem to do better when they can participate in administering their own therapy. “In this type of nutritional therapy patients lived as long as those on chemotherapy and in some cases longer,” Young reported. The average survival period for patients with glioblastoma multiforme undergoing surgery, radiation, and chemotherapy is 42 weeks.

The 43 patients selected for the study had all undergone surgery for removal of as much of the brain tumor as possible and had undergone maximum recommended doses of x-ray treatment. The study group involved patients from 21 to 65 years of age, of either sex, with no atypical dietary habits or restrictions, and no significant food allergies. In the study, patients at VCU and at the University of Tennessee were divided into four groups: those receiving diet therapy only; those receiving diet therapy combined with chemotherapy using the drug BCNU; those receiving BCNU only; and finally a control group that received no additional therapy following surgery and x-ray treatment, which is the most frequently employed therapy.

For those patients receiving nutritional therapy, a sample of the brain tumor was assayed to identify the essential amino acid needed by the tumor. Under the direction of Banks, the “target” essential amino acid was identified by incubating minced tumor tissue and an amino acid media. The “tumor dependent” amino acids decreased during the three-hour incubation period. Although specific “tumor dependent” amino acids varied from patient to patient, some essential amino acids were identified more frequently than others as “tumor dependent” by this procedure.

Based on each individual laboratory test result, Jennings designed diets deficient in the “tumor dependent” amino acid. The diets developed by Jennings met or exceeded the minimum requirements for all essential amino acids except the “tumor dependent” amino acid and met the 1974 National Research Council Recommended Dietary Allowances for other nutrients.

The diet therapy began about two weeks following the completion of radiation therapy. The patients on the restricted diets were admitted to the university's Medical College of Virginia Hospitals' Clinical Research Center for one- or two-week periods to adjust to the diet regimen. Additional diet instruction was provided during bimonthly follow-up visits, and each patient was instructed to keep daily food records. During the bimonthly evaluation visits, the clinical evaluation included an assessment of the patient's

plasma amino acid profile, nutritional status, clinical performance, and a brain scan to determine the status of the tumor.

"It is still too early to evaluate the diet therapy as too few patients have been treated to provide concrete conclusions. However, we do know that diet therapy intervention, either alone or in combination with chemotherapy, is at least as safe and effective as other currently accepted therapies," said Young.

Young has been involved in brain cancer research for ten years and has launched two other major innovative studies in therapy techniques. In one of the studies underway, Young is experimenting with the use of BCNU, a chemical proved to prolong survival in patients with primary brain cancer but which often causes pulmonary fibrosis. Young's research indicated that by injecting BCNU directly into the carotid artery, rather than injecting intravenously, the lung damage may be avoided. Initial research also indicates that the BCNU may be even

more effective in fighting a brain tumor when injected directly into the carotid artery.

In previous brain cancer therapy research, Young experimented with the injection of lymphocytes directly into the brain tumor to stimulate the body's own immunotherapy response. He found that lymphocyte therapy was somewhat effective in fighting small brain tumors detected in the early stages of development.

"The treatment of brain tumors presents a unique challenge because the primary cancer operation—that is radical surgery—obviously is unsatisfactory for cancers of the brain. That's why," Young concluded, "it is so important that we find new techniques for treating brain cancer and modify existing therapies."



# Virginia Commonwealth University

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## Fiscal Year 1982

**Current Operations** The accompanying financial highlights reflect the growth in Virginia Commonwealth University and the Medical College of Virginia Hospitals as they rise in national prominence.

Current funds revenues showed an increase of 10 percent over fiscal year 1981 to a total of \$282 million. Of these revenues, 34 percent was derived from the state for general support and indigent patient care. The remaining 66 percent was primarily self-generated through charges to students and patients and through grants and contracts awarded by private and federal sources.

Current funds expenditures and mandatory transfers increased \$29 million, or 11 percent, to \$283 million during the fiscal year ended June 30, 1982. Unrestricted expenditures and mandatory transfers increased 13 percent, while the restricted category reflected a 2 percent increase.

In research, VCU retained its status as one of the country's top 80 universities in terms of federal dollars received to support basic and applied research.

The quality of many programs offered by VCU improved during the fiscal year without actual budgetary increases. This enhancement was accomplished through the internal reallocation of funds and positions and the reduction of low demand programs based on recommendations concerning the university's goals and objectives and the best means to achieve them.

**Assets** Total Current Funds assets increased by 5 percent to \$70 million. Cash and temporary investments increased \$2.2 million, or 10 percent, while accounts receivable increased \$0.7 million, or 2 percent. Cash and temporary investments constitute 35 percent of total Current Funds assets as of June 30, 1982. This figure compares with 33 percent as of the prior fiscal year-end and reflects an increase in institutional liquidity.

Plant Fund assets increased \$27.8 million, or 9 percent, during the fiscal year. This increase is net of a \$37.8 million increase in total investment in plant and a \$10 million decrease primarily in cash and temporary investments and capital appropriations receivable from the state.



# Financial Highlights

## Five Year Comparison 1978-82

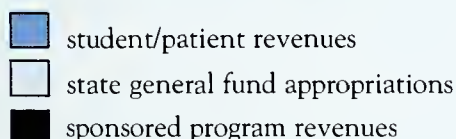
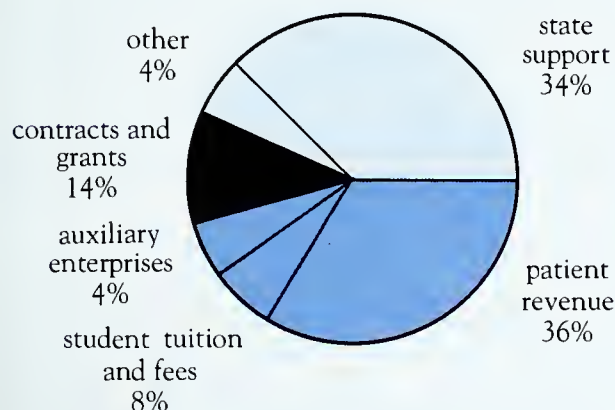
### Current funds revenues

	Fiscal Years				
	1982	1981	1980	1979	1978
Student tuition	\$ 22,653	20,259	17,855	15,429	15,144
Gifts/grants/contracts	39,595	37,447	30,223	25,714	20,729
State appropriations	96,652	91,645	85,441	79,730	65,845
Patient revenues	101,272	88,719	76,237	64,821	55,209
Auxiliary enterprises	12,348	11,312	10,334	9,553	9,509
Other	9,509	7,583	8,206	5,838	5,426
Total revenues (in thousands of dollars)	\$282,029	256,965	228,296	201,085	171,862

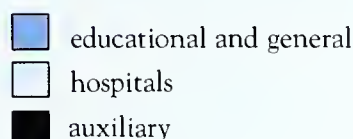
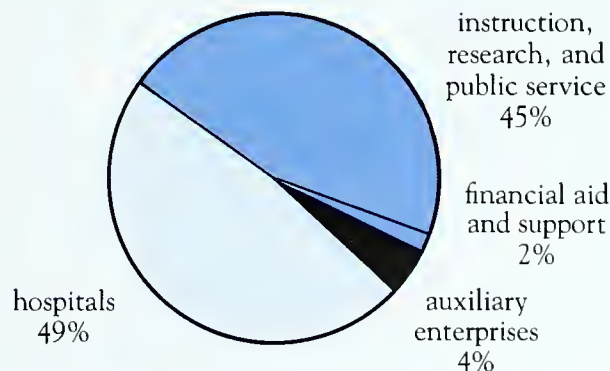
### Current funds expenditures, transfers, and additions to working capital

Education and general	131,848	120,679	105,279	95,449	78,008
Auxiliary enterprises	12,256	10,582	9,824	9,438	9,109
Hospital	138,680	122,477	106,028	90,653	79,655
Net additions (deductions) to plant funds, sinking funds, and working capital	( 755)	3,023	7,165	5,545	5,090
	\$282,029	256,761	228,296	201,085	171,862

Current Funds Revenues  
Fiscal Year 1982



Current Funds Expenditures  
Fiscal Year 1982



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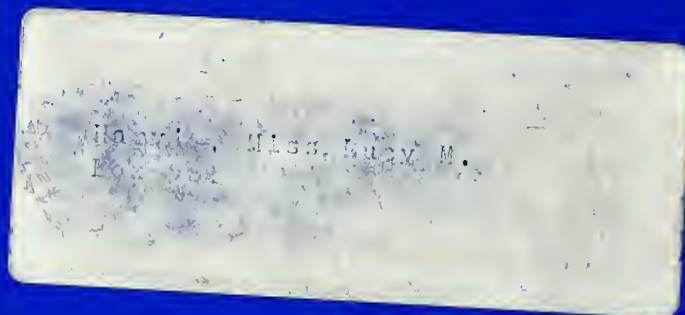




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